DRAFT

NAVY TRAINING SYSTEM PLAN

FOR THE

AN/AQS-14A

SONAR DETECTING SET

N85-NTSP-P-30-9903/D

SEMPTEMBER 1999

AN/AQS-14A SONAR DETECTING SET

EXECUTIVE SUMMARY

The AN/AQS-14A SONAR Detecting Set is a high resolution, side-looking helicopter towed mine hunting system used to detect, localize, classify, mark, and permanently record locations of unburied bottom and moored sea mines and other objects of interest. It is a modification to the existing AN/AQS-14 system. The AN/AQS-14A is designed to be operationally employed by Helicopter Mine (HM) Countermeasure Squadrons operating the MH-53E helicopter in support of Airborne Mine Countermeasures (AMCM) operations. The AMCM community is a worldwide rapid deployment force operating from shore bases and helicopter capable ships. The AN/AQS-14A system has completed all major acquisition milestones and is in Phase III in the acquisition process.

The AN/AQS-14A replaces selected components of the AN/AQS-14 to modernize airborne hardware, reduce the system's volume and improve operability and processing. The port and starboard SONAR scan video monitors are replaced by a single 19-inch color monitor which displays port and starboard SONAR scan data. The Scan Converter is eliminated, with its function incorporated into a Control Processor that uses a joystick to allow the console operator to accurately mark and record the position of a mine-like object or other object of interest. A Power Distribution Unit replaces the System Power and Test Unit and features a redesigned front panel with simplified controls.

The manpower required for operational and maintenance support of the AN/AQS-14A is governed by operational requirements combined with preventive and corrective maintenance requirements. Existing AN/AQS-14 billets at the organizational and intermediate levels are sufficient to support the AN/AQS-14A.

The AN/AQS-14A system utilizes the three level maintenance concept per OPNAVINST 4790.2G. Organizational level maintenance consists of system repair through Weapon Replaceable Assemblies (WRA) replacement while intermediate level maintenance consists of WRA repair through Shop Replaceable Assemblies (SRA) replacement with the faulty SRAs repaired at the depot level. Since parts of the system either operate directly in salt water or are exposed to the salt-water environment, vigorous corrosion control inspection and correction procedures are essential maintenance actions for both organizational and intermediate levels of maintenance. Navy Aviation Technicians with Navy Enlisted Classification 8391 perform organizational and intermediate level maintenance. Northrop-Grumman Oceanic Division personnel perform depot level maintenance and perform on-site services as required. Formal maintenance training for the AN/AQS-14A is conducted at Maintenance Training Unit (MTU) 1031, Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET) Norfolk, Virginia. Operator training is conducted at AMCM Weapon System Training School (AWSTS), Norfolk, Virginia.

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LIST OF ACRONYMS

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LIST OF ACRONYMS

AIMD	Aircraft Intermediate Maintenance Department
AMCM	Airborne Mine Countermeasures
AT	Aviation Electronics Technician
AWSTS	Airborne Mine Countermeasures Weapon Systems Training School
BITE	Built-In Test Equipment
CBT	Computer-Based Training
CETS	Contractor Engineering Technical Services
CNO	Chief of Naval Operations
CSS	Coastal Systems Station
FY	Fiscal Year
HM	Helicopter Mine Countermeasures
IETM	Interactive Electronic Technical Manual
ILSP	Integrated Logistics Support Plan
ILTE	Intermediate Level Test Set
IPB	Illustrated Parts Breakdown
ISSP	Interim Supply Support Plan
MIR	Mission Interface Removables
MIW	Mine Warfare
MP	Maintenance Plan
MRC	Maintenance Requirements Card
MSD	Material Support Date
MSU	Material Support Unit
MTIP	Maintenance Training Improvement Program
MTU	Maintenance Training Unit
NA	Not Applicable
NAMTRAGRU DET	Naval Air Maintenance Training Group Detachment
NAS	Naval Air Station
NEC	Navy Enlisted Classification
NTSP	Navy Training System Plan

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LIST OF ACRONYMS

OI	Objects of Interest
PEO	Program Executive Office
PSS	Performance Support System
RFT	Ready For Training
SRA	Shop Replaceable Assembly
TTE	Technical Training Equipment
TD	Training Device
WRA	Weapon Replaceable Assembly

AN/AQS-14A SONAR DETECTING SET

PREFACE

This Draft Navy Training System Plan (NTSP) was developed to update the AN/AQS-14A Navy Training Plan, AM-049, approved July 1995 and revised June 1998. This NTSP update complies with guidelines set forth in the Navy Training Requirements Documentation Manual, OPNAV Publication P-751-1-9-97, and reflects the latest information available. It provides updated information on AN/AQS-14A system upgrades and manpower, personnel, and training requirements. Although detailed system characteristics, capabilities, and functions are confidential, the contents of this NTSP are unclassified.

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. **Nomenclature-Title-Acronym.** AN/AQS-14A SONAR Detecting Set

2. **Program Element.** 0204302N

B. SECURITY CLASSIFICATION. Detailed data on system characteristics, capabilities, and functions are classified. Information of this nature may be obtained by contacting the Program Executive Officer (PEO) for Mine Warfare (MIW), PMS210.

1. **System Characteristics** ..... Confidential
2. **Capabilities** ..... Confidential
3. **Functions** ..... Confidential

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor ..... CNO (N852)

OPO Resource Sponsor ..... CNO (N859)

Functional Mission Sponsor (if applicable) ..... CNO (N852)

Developing Agency ..... PEO (MIW) PMS210

Training Agency ..... CINCLANTFLT
CNET

Training Support Agency ..... PEO (MIW) PMS210

Manpower and Personnel Mission Sponsor ..... CNO (N132)
NAVPERSCOM (PERS-4, PERS-404)

Director of Naval Training ..... CNO (N7)

D. SYSTEM DESCRIPTION

1. Operational Uses. The AN/AQS-14A SONAR Detecting Set, from here on referred to as the AN/AQS-14A, is a helicopter-towed reconnaissance and minehunting system used to detect, localize, and classify unburied bottom and moored sea mines and other objects of interest

(OI). It is deployed by Helicopter Mine (HM) Countermeasures Squadrons in support of Airborne Mine Countermeasures (AMCM) operations.

2. Foreign Military Sales. Not Applicable (NA)

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST. Original testing and Technical Evaluation (TECHEVAL) of the AN/AQS-14 system was conducted in June 1979 by Coastal Systems Station (CSS), Panama City, Florida. The Operational Evaluation (OPEVAL) was completed in September 1979 by the Commander, Operational Evaluation Force (COMOPTEVFOR). Since this is an upgrade to an existing system, TECHEVAL and OPEVAL on the AN/AQS-14A system components was not done, but first unit testing was performed by CSS and Northrop Grumman, Oceanic Systems during second quarter Fiscal Year (FY) 95 aboard the research vessel Athena. Airborne testing was performed immediately afterward.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED. The AN/AQS-14A upgrades and replaces selected Weapon Replaceable Assemblies (WRAs) of the AN/AQS-14 Detecting Set. The upgrade results in the modernization of airborne hardware, reduction of the system's total volume, and improvements in operability and processing.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The AN/AQS-14A is a high resolution, side-looking SONAR detecting system that is streamed, towed, and recovered from the MH-53E helicopter. Its mission is to locate, identify, and record types and locations of mines and other OI. The AN/AQS-14A is divided into three major groups of components, the SONAR Towed Body, the Tow Cable Assembly, and the Airborne Electronics Assembly. The system also utilizes Mission Interface Removeables (MIR) to interface the AN/AQS-14A with the helicopter. The AN/AQS-14A also features an optional Inversion Kit, which, when installed, allows the SONAR Towed Body to operate in the inverted mode to detect moored mines.

a. SONAR Towed Body (Unit 7). The SONAR Towed Body carries a side-looking, multi-beam SONAR. It can maintain an operator-selected altitude above the bottom or depth below the surface by means of an active control system and sensors. It contains the electronics necessary to pre-process and multiplex the scan, environment, and control data, and process various control commands. The SONAR Towed Body is considered to be one WRA.

b. Tow Cable Assembly (Unit 6). The Tow Cable Assembly is an armored non-magnetic cable that provides the mechanical and electrical signal link between the SONAR Towed Body and the helicopter. Signal multiplexing through the coaxial conductor makes possible a small cable diameter and low drag. The Tow Cable Assembly is considered one WRA and is dispensed and retrieved by a pallet-mounted hydraulic winch.

c. Airborne Electronics Assembly. The Airborne Electronics Assembly is pallet-mounted and installed forward in the MH-53E helicopter and manned by two aircrew AMCM system operators. The Airborne Electronics Assembly includes the following WRAs:

(1) Video Monitor (Unit 1). The IP-1428A/AQS-14 Video Monitor is a 19-inch, high-resolution, 256-color monitor which displays port and starboard SONAR data and annotation data. It also displays target logs and SONAR coverage plots. It operates in conjunction with the Control-Processor (unit 2), and displays menu icons for operator control of the SONAR Towed Body (unit 7) and the Recorder-Reproducer (unit 4).

(2) Control-Processor (Unit 2). The CD-107/AQS-14A Control-Processor combines the AN/AQS-14 Control-Processor and Signal Data Converter into a single state-of-the-art Control Processor capable of advanced processing. The Control-Processor's major functions include:

- Interface with the Power Distribution Unit by sending SONAR Towed Body sensor control data and receiving image data over the multiplexing-demultiplexing link
- Interface with the Video Monitor for processing and displaying port and starboard SONAR image data, SONAR Towed Body status, and proper menu selected screens
- Interface with the joystick for controlling the screen menu and data field on the Video Monitor
- Interface with the Recorder-Reproducer for recording SONAR image data and for downloading mission planning information
- Interface with the MH-53E navigational system for latitude and longitude information; compute SONAR Towed Body trail distance and track offset and compensate target positioning of SONAR Towed Body heading for target location calculations
- Support of operator classification of marked targets and logs targets onto the Recorder-Reproducer tape periodically; providing operator interface menus for control of the processor functions

(3) Recorder-Reproducer (Unit 4). The RD-507A/AQS-14 Recorder-Reproducer replaces the previous analog tape recorder unit with a digital recorder-reproducer. This unit has been upgraded even further by replacing the initially developed SVHS format tape drive with an 8-mm Exabyte format model. The unit records and reproduces digital SONAR image data, navigational data, and SONAR Towed Body status data.

(4) Power Distribution Unit (Unit 5). The redesigned PP-7835A/AQS-14 Power Distribution Unit distributes and monitors the power input to the Video Monitor, Control-Processor, Recorder-Reproducer, and the SONAR Towed Body. It also provides the multiplex link between the Tow Cable Assembly and the Control-Processor.

d. Interconnecting Cables. Each interconnecting cable (labeled W1 through W7 and W10 through 13) is considered to be a WRA. These cables provide the necessary signal and power connections to interface the airborne console components.

e. Mission Interface Removables. In addition to the AN/AQS-14A system components, the helicopter must be configured with certain MIR. The MIR is palletized for ease of installation and transport and is identical to that used by the AN/ALQ-141 Airborne Mine Countermeasures Set. The MIR major assemblies are described below:

(1) Console, Pallet and Seat Assembly. This assembly is pallet-mounted and consists of two operator seats and a console that is capable of receiving the airborne electronics components of the AN/AQS-14A or the AN/ALQ-141.

(2) Single Winch II Pallet Assembly. Also pallet-mounted, this assembly consists of a single drum with level wind that is used to deploy and recover the towed vehicles of the AN/AQS-14A or the AN/ALQ-141.

(3) Davit Assembly. Attached to the floor of the aircraft by two quick release pins and two vertical bolts, this assembly is used to lift and deploy the SONAR Towed Body. The davit frame is driven fore and aft by a rotary hydraulic actuator through a power hinge and gear reduction.

(4) Transport Cradle Assembly. This assembly is used to transport the SONAR Towed Body to and from the helicopter and to secure it to the helicopter ramp during flight.

f. Inversion Kit. The Inversion Kit is an optional feature that allows field conversions of the SONAR Towed Body for operation in an inverted mode to search for near-surface objects vice bottom search.

2. Physical Description

AN/AQS-14A SONAR DETECTING SET SYSTEM COMPONENTS		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (INCHES) (HEIGHT X WIDTH X DEPTH)**
Video Monitor	75.0	16.37 x 20.25 x 19.59
Control-Processor	100.0	16.08 x 20.25 x 22.50
Recorder-Reproducer	61.5	10.5 x 20.25 x 22.00
Power Distribution Unit	125.0	16.08 x 20.25 x 22.50

AN/AQS-14A SONAR DETECTING SET SYSTEM COMPONENTS		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (INCHES) (HEIGHT X WIDTH X DEPTH)**
Tow Cable Assembly	440.0	950 feet x 0.58 400 feet x 0.58
SONAR Towed Body	554.0	66.50 x 128.00 x 40.00

MISSION INTERFACE REMOVABLE		
COMPONENT	**WEIGHT (POUNDS)**	**SIZE (INCHES) (HEIGHT X WIDTH X DEPTH)**
Davit Assembly	354	22.0 x 90.0 x 108.0 (See note.)
Single Winch II	482	37.5 x 50.0 x 41.0
Console, Pallet and Seat Assembly	242	56.5 x 47.0 x 68.0
Transport Cradle Assembly	145	28.0 x 47.0 x 65.0

Note: Dimensions of the highest part of the Davit when lying flat.

3. New Development Introduction. The AN/AQS-14A is a modification to the existing AN/AQS-14 SONAR Detecting Set. Modifications were done by Northrop Grumman representatives on-site at HM-14 and HM-15.

4. Significant Interfaces. NA

5. New Features, Configurations, or Material. The AN/AQS-14A incorporates the following changes to the AN/AQS-14 system.

- The port and starboard SONAR scan video monitors are replaced by a single 19-inch color monitor which displays port and starboard SONAR scan data, the main menu, and a control bar annotation display.

- The Scan Converter (unit 3) is eliminated. Its functions are incorporated into the Control-Processor.

- The Control-Processor has been redesigned to include the Scan Converter and incorporates a joystick to allow the console operator to accurately mark and record the position of a mine-like OI.

- The Power Distribution Unit replaces the system Power and Test Unit. It features a redesigned front panel with simplified power distribution controls.

H. CONCEPTS

1. Operational Concept. As part of the minehunting system, the AN/AQS-14A is used in conjunction with moored and influence mine sweeping in support of amphibious operations, clearance of ports, clearance of lines of communications, and riverine operations. The system is capable of detecting, classifying, and marking mines and other underwater objects and can be used independently to provide mine reconnaissance and surveillance and to provide data on bottom characteristics. The normal operating crew consists of a pilot, co-pilot, first crewman, two certified operators, and two AMCM aircrew utilized as launch and recovery personnel.

2. Maintenance Concept

a. Organizational. Organizational level maintenance is performed either on the flightline or while airborne. Organizational level maintenance is limited to pre-flight and post-flight inspection, minor flightline repairs and troubleshooting utilizing Built-In Test Equipment (BITE) to the faulty WRA level. The system is designed to minimize the frequency and complexity of maintenance at the organizational level. The AN/AQS-14A system is directly exposed to salt water and requires a vigilant corrosion control program. Organizational level maintenance is performed by Aviation Electronics Technicians (ATs) with Navy Enlisted Classification (NEC) 8391 assigned to Work Center 210. In-flight maintenance is limited to only fuse and/or bulb replacement etc., and is performed by AMCM aircrew personnel of various aviation ratings with NEC 8226.

Note: Aircraft AMCM configuration changes (entire system swap out, which includes the AN/AQS-14A) is accomplished by organizational level ATs and AEs with NEC 8391 working out of Work Center 230. This is not considered a corrective maintenance action.

(1) Preventive Maintenance. Preventive Maintenance normally occurs between missions and includes limited scheduled maintenance using Maintenance Requirements Cards (MRCs). Post-operation system corrosion control includes the cleaning and freshwater washdown of units six and seven and cleaning of all Airborne Electronics Assembly WRAs and MIRs.

(2) Corrective Maintenance. Corrective Maintenance at the organizational level is limited to replacement of bulbs and fuses, minor front panel adjustments, and cleaning and reseating loose or dirty connectors. Faulty WRAs identified using BITE are replaced and sent to the Aircraft Intermediate Maintenance Department (AIMD) for repair.

b. Intermediate. Intermediate level maintenance is performed aboard ship or designated AIMDs ashore. Intermediate level maintenance consists of WRA repair through Shop Replaceable Assembly (SRA) replacement and selected SRA repair within the scope of repair verification. Intermediate level personnel also perform preventive and corrective corrosion inspections, treatment, and repair, and the lubrication of components as required. When deployed, intermediate level maintenance is performed by intermediate level trained squadron personnel utilizing the AN/USM-668 SONAR Detecting Test Set commonly referred to as the Dual Intermediate Level Test Set (ILTE). This test set contains 13 WRAs located in a cabinet subdivided into three bays. The ILTE is housed in a transportable shelter called a Material Support Unit (MSU). The MSU contains all the equipment necessary to repair the AN/AQS-14A and document intermediate level maintenance actions. Intermediate level maintenance is performed by ATs assigned to Work Center 74C who have been trained by a Northrop Grumman representative using the Northrop Grumman developed intermediate level course. No NEC is associated with this course and the intermediate level technician may or may not have been through the NEC 8391 track. Further information on this course is in the Training Concept below.

c. Depot. Northrop Grumman, Oceanic Systems, Annapolis, Maryland, performs depot level maintenance. Systems and components are returned to the depot level under the Return Material for Repair (RMR) program. All WRAs, SRAs, and repairable Sub-SRAs where the repair is deemed beyond the capability of the intermediate level are shipped through normal supply channels. Depot level maintenance also includes system calibration beyond normal adjustments. The SONAR Towed Body is planned for depot level overhaul every five years.

d. Interim Maintenance. Contractor Engineering Technical Services (CETS) is provided by Northrop-Grumman Oceanic Systems personnel. A CETS field representative is assigned at each of the two AMCM squadrons and is also available to the local AIMD for technical support and training on an on-going and as-needed basis. The CETS field representative deploys with the squadron. An Interim Supply Support Plan (ISSP) has been promulgated until the Material Support Date (MSD) can be achieved (currently planned for August 30, 2001).

e. Life-Cycle Maintenance Plan. The SONAR Towed Body is planned to be completely overhauled as part of the Standard Depot Level Maintenance (SDLM) program. All fleet units that have been in service for five years are sent to the depot level for restoration to a like-new condition. High wear items are replaced, electronics are tested, aligned, and calibrated, and cosmetic repairs are made to the outer shell and windows. No other units of the system are included in a scheduled life-cycle maintenance plan.

3. Manning Concept. The upgrade of the AN/AQS-14 and redesignation to the AN/AQS-14A does not require any change to current quantitative and qualitative manpower or watch station requirements. Refer to Part II of this NTSP for specific activities' manpower requirements.

4. Training Concept. Formal training is required to support the operational and maintenance aspects of the AN/AQS-14A. Pilots and aircrew receive operational training at

Airborne Mine Countermeasures Weapon Systems Training School (AWSTS), Naval Air Station (NAS) Norfolk, Virginia. Actual training flights are conducted at the fleet squadron where the aircrews are assigned. Organizational level maintenance personnel receive training at Maintenance Training Unit (MTU) 1031, Naval Air Maintenance Training Group Detachment (NAMTRAGRU DET) Norfolk, Virginia. Intermediate level maintenance training is conducted at the supporting AIMD utilizing Northrop Grumman CETS and the Northrop Grumman developed intermediate level course.

The Performance Support System (PSS) (Figure I-1) maintenance and training concept has been incorporated for the AN/AQS-14A transition. AMCM squadrons and AIMDs are equipped with stand-alone computer systems housing both Interactive Electronic Technical Manuals (IETMs) and Computer-Based Training (CBT). Each AMCM squadron is outfitted with four PSS systems, and each AIMD with three. The AN/AQS-14A transition software was installed into these existing systems upon site activation. The IETMs includes appropriate technical information and supply support data to complete maintenance actions. Instructional material for the organizational and intermediate level CBT been delivered with all associated instructional material to HM-14, HM-15, AIMD Norfolk, Virginia, AIMD Corpus Christi, Texas, and the USS Inchon, with final delivery completed in July 1999. All CBT training is currently on-line. Materials include the CBT lessons, instructor guides, and student guides. These materials, in conjunction with an operational AN/AQS-14A and required support equipment, are used to provide fleet training. The CBT courses integrated within the PSS provide the training required for the AN/AQS-14A. There are three different CBT courses for the ANAQS-14A. They are:

- Organizational level (contains 16 lessons)
- Intermediate level (contains 18 lessons)
- Console operator (contains 10 lessons)

Figure I-1. Performance Support System

a. Initial Training. Initial maintenance and operator training courses were developed by Northrop Grumman. Northrop Grumman personnel conducted the initial intermediate level maintenance training, while personnel from CSS, Panama City, conducted both the initial operator and organizational level maintenance training. All initial training is complete.

b. Follow-on Training. Follow-on training for maintenance and aircrew operator personnel is conducted at MTU 1031, NAMTRAGRU DET Norfolk and AWSTS, Norfolk, respectively. Pilot and Aircrew training information can be found in the MH-53E NTSP (N88-NTSP-A-50-8417D/D) and is not included in this NTSP.

Title	**Career AMCM Electronic/Electrical Systems Organizational/Intermediate Maintenance**
CIN	D-102-2727
Model Manager ..	NAMTRAGRU DET Norfolk
Description	This track provides career AT personnel with sufficient knowledge of the AN/AQS-14A system to perform routine maintenance under limited supervision.
Location	MTU 1031, NAMTRAGRU DET Norfolk
Length	65 days
RFT date	Currently available
Skill identifier	AT 8391
TTE/TD	Training Device: AN/AQS-14A Console and complete system classroom "hot mock-up"
Prerequisites	C-100-2018, Avionics Technician Class A1 NEC 8891

Title	**AN/AQS-14 Side Looking SONAR Operator**
CIN	D-050-2720
Model Manager ..	AWSTS, NAS Norfolk
Description	This course provides the basic skills necessary to operate the AN/AQS-14A in fleet AMCM squadrons.
Location	AWSTS, NAS Norfolk
Length	5 days
RFT date	Currently available
Skill identifier	NEC 8226 (AD, AM, AT, AE, AO, or PR)
TTE/TD	Training Devices: ° AN/AQS-14A Console Simulator ° AMCM Stream and Recovery Module.

Prerequisites ..... D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline
NEC 8201
NEC 8225

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AT 8391	° C-100-2020, Avionics Common Core Class A1 ° C-100-2018, Avionics Technician O Level Class A1 ° D-102-2736, AMCM Electronic Systems Initial Organizational/Intermediate Maintenance
AD 8226	° C-601-2011, Aviation Machinist's Mate Common Core Class A1 ° C-601-2012, Aviation Machinist's Mate Helicopter Fundamentals Strand Class A1 ° Q-050-1500, Naval Aircrew Candidate School ° A1D-2D-0039, Survival, Evasion, Resistance, and Escape ° B-9E-1226, Naval Aviation Water Survival Program R3 ° B-322-0042, Refresher Aerospace Physiology Helicopter Training. ° D-050-2791, MH-53E Fleet Replacement Aircrew (Utility) Category 1 Pipeline ° D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AM 8226	° C-603-0175, Aviation Structural Mechanic (Structures and Hydraulics) Common Core Class A1 ° C-603-0176, Aviation Structural Mechanic (Structures and Hydraulics) Organizational Intermediate Level Maintenance Strand Class A1 ° Q-050-1500, Naval Aircrew Candidate School ° A1D-2D-0039, Survival, Evasion, Resistance, and Escape ° B-9E-1226, Naval Aviation Water Survival Program R3 ° B-322-0042, Refresher Aerospace Physiology Helicopter Training ° D-020-2791, MH-53E Fleet Replacement Aircrew (Utility) Category 1 Pipeline ° D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline
AT 8226	° C-100-2020, Avionics Common Core Class A1 ° C-100-2018, Avionics Technician O Level Class A1 ° Q-050-1500, Naval Aircrew Candidate School ° A1D-2D-0039, Survival, Evasion, Resistance, and Escape ° B-9E-1226, Naval Aviation Water Survival Program R3 ° B-322-0042, Refresher Aerospace Physiology Helicopter Training ° D-020-2791, MH-53E Fleet Replacement Aircrew (Utility) Category 1 Pipeline ° D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
AE 8226	° C-100-2020, Avionics Common Core Class A1 ° C-602-2039, Aviation Electrician's Mate O Level Strand Class A1 ° Q-050-1500, Naval Aircrew Candidate School ° A1D-2D-0039, Survival, Evasion, Resistance, and Escape ° B-9E-1226, Naval Aviation Water Survival Program R3 ° B-322-0042, Refresher Aerospace Physiology Helicopter Training ° D-020-2791, MH-53E Fleet Replacement Aircrew (Utility) Category 1 Pipeline ° D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline
AO 8226	° C-646-2011, Aviation Ordnanceman Common Core Class A1 ° C-646-2012, Aviation Ordnanceman Airwing Strand Class ° Q-050-1500, Naval Aircrew Candidate School ° A1D-2D-0039, Survival, Evasion, Resistance, and Escape ° B-9E-1226, Naval Aviation Water Survival Program R3 ° B-322-0042, Refresher Aerospace Physiology Helicopter Training ° D-020-2791, MH-53E Fleet Replacement Aircrew (Utility) Category 1 Pipeline ° D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
PR 8226	° C-602-2035, Aircrew Survival Equipmentman Common Core Class A1 ° Q-050-1500, Naval Aircrew Candidate School ° A1D-2D-0039, Survival, Evasion, Resistance, and Escape ° B-9E-1226, Naval Aviation Water Survival Program R3 ° B-322-0042, Refresher Aerospace Physiology Helicopter Training ° D-020-2791, MH-53E Fleet Replacement Aircrew (Utility) Category 1 Pipeline ° D-050-2793, MH-53E Fleet Replacement Aircrew (AMCM) Category 1 Pipeline

d. Training Pipelines. No new training pipelines are required to support the AN/AQS-14A.

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development

a. Maintenance Training Improvement Program. The Maintenance Training Improvement Program (MTIP) is used to establish an effective and efficient training system responsive to fleet training requirements. MTIP is a training management tool that, through diagnostic testing, identifies individual training deficiencies at the organizational and intermediate levels of maintenance. MTIP is the comprehensive testing of one's knowledge. It consists of a bank of test questions managed through automated data processing. The Deputy Chief of Staff for Training assisted in development of MTIP by providing those question banks (software) already developed by the Navy. MTIP was implemented per OPNAVINST 4790.2 series. MTIP allows increased effectiveness in the application of training resources through identification of skills and knowledge deficiencies at the activity, work center, or individual technician level. Refresher training is concentrated where needed to improve identified skill and knowledge shortfalls. MTIP will be replaced by Aviation Maintenance In-Service Training (AMIST).

b. Aviation Maintenance In-Service Training. Aviation Maintenance In-Service Training (AMIST) is intended to support the Fleet training requirements now satisfied by MTIP, and in that sense is the planned replacement. However, it is structured very differently, and will function as an integral part of the new Aviation Maintenance Training Continuum System (AMTCS) that will replace the existing aviation maintenance training structure. AMIST will provide standardized instruction to bridge the training gaps between initial and career training.

With implementation of AMIST, technicians will be provided the training required to maintain a level of proficiency necessary to effectively perform the required tasks to reflect career progression. AMIST will begin when funding becomes available.

c. Aviation Maintenance Training Continuum System. AMTCS will redesign the aviation training process (training continuum), and introduce CBT throughout the Navy technical training process. The application and adoption of recent advances in computer hardware and software technology will enable CBT, with its basic elements of Computer Managed Instruction, Computer Aided Instruction, and Interactive Courseware, to be integrated into the training continuum and provide essential support for standardizing technical training.

2. Personnel Qualification Standards. There are no Personnel Qualification Standards (PQS) requirements developed for this system.

3. Other Onboard or In-Service Training Packages. NA

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers

CONTRACT NUMBER	MANUFACTURER	ADDRESS
N00024-93-G-6336	Northrop-Grumman Oceanic Systems	Annapolis, Maryland

2. Program Documentation. An Integrated Logistics Support Plan (ILSP), Maintenance Plan (MP), and Draft Training Set (AN/AQS-14A-T1) MP have been developed and distributed by PMS210 (MIW). The next review and revision is expected during FY00.

3. Technical Data Plan. Technical publications necessary to support training and maintenance for the AN/AQS-14A are itemized in Part IV.B.3 of this document. MRCs have been developed and distributed in support of the system's Planned Maintenance System requirements. Naval Surface Warfare Center, CSS, Panama City, Code A22, ensures all required approved publications have been delivered and newly developed documents are distributed.

4. Test Sets, Tools, and Test Equipment. Refer to Part IV.A.1 of this NTSP for Test Sets, Tools, and Test Equipment requirements.

5. Repair Parts. An ISSP has been prepared by Technical Systems Integration, Inc. under the direction of PMS210 (MIW). The ISSP defines the organization, responsibilities, and operating policies to be used during the Interim Supply Support period, which currently exists until MSD, now planned for 30 August 2001. Squadrons and AIMDs procure parts using standard supply procedures for part numbered requisitions. The NAS Supply Department fills locally or passes the requisition to Navy Inventory Control Point (NAVICP) for forwarding to

Northrop Grumman. Northrop Grumman satisfies the requirement from stock or through a vendor.

6. Human Systems Integration. NA

K. SCHEDULES. All AN/AQS-14 SONAR Detecting Sets have been transitioned to the AN/AQS-14A and are currently in use at HM-14 and HM-15 with complete intermediate level support at AIMD Corpus Christi, and AIMD Norfolk. Shipboard AIMD support exists on the USS Inchon (MCS 12). All technical documentation is on hand and training devices and courses are in place and on-line.

1. Installation and Delivery Schedules. Installation is complete. The upgrade of the AN/AQS-14 to the AN/AQS-14A on the MH-53E helicopter has been completed.

2. Ready For Operational Use Schedule. The AN/AQS-14A system was delivered to the fleet ready for operational use and is currently in operation.

3. Time Required to Install at Operational Sites. NA

4. Foreign Military Sales and Other Source Delivery Schedule. NA

5. Training Device and Technical Training Equipment Delivery Schedule. The primary maintenance training equipment used is a complete system "hot mock-up" and is set up and in use at MTU 1031, NAMTRAGRU DET Norfolk. The AN/AQS-14A Console Simulator and AMCM Stream and Recovery Module used for aircrew training are onboard at AWSTS, Norfolk.

L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
AN/AQS-14A Integrated Logistics Support Plan	ILSP AM-049	PMS210	Approved Jun 98
AN/AQS-14A Maintenance Plan	MP AM-049	PMS210	Approved Jun 98
AN/AQS-14A Interim Supply Support Plan	ISSP AM-049	PMS210	Approved Aug 98

PART II - BILLET AND PERSONNEL REQUIREMENTS

The following elements are not affected by the AN/AQS-14A Sonar Detecting Set and, therefore, are not included in Part II of this NTSP:

II.A. Billet Requirements

II.A.2.a. Operational and Fleet Support Activity Deactivation Schedule

II.A.2.b. Billets to be Deleted in Operational and Fleet Support Activities

II.A.2.c. Total Billets to be Deleted in Operational and Fleet Support Activities

PART II - BILLET AND PERSONNEL REQUIREMENTS

II.A. BILLET REQUIREMENTS

II.A.1.a. OPERATIONAL AND FLEET SUPPORT ACTIVITY ACTIVATION SCHEDULE

SOURCE: Total Force Manpower Management System **DATE:** 4/1/99

ACTIVITY, UIC		**PFYs**	**CFY00**	**FY01**	**FY02**	**FY03**	**FY04**
OPERATIONAL ACTIVITIES - NAVY							
Helicopter Mine Countermeasures, HM 14	53827	1	0	0	0	0	0
Helicopter Mine Countermeasures, HM 15	55201	1	0	0	0	0	0
TOTAL:		2	0	0	0	0	0
FLEET SUPPORT ACTIVITIES - NAVY							
AIMD NAS Norfolk	44325	1	0	0	0	0	0
Helicopter Tactical Wing 1, NAS	44890	1	0	0	0	0	0
HMT 302 Navy Det	55203	1	0	0	0	0	0
MCS 12 Inchon	20009	1	0	0	0	0	0
Naval Air Station, Corpus Christi	00216	1	0	0	0	0	0
NAVRTYWING ACTESTRON	39784	1	0	0	0	0	0
NAVSURFWARCEN COASTSYSTA NWC	61331	1	0	0	0	0	0
COMHELWINGRES	09983	1	0	0	0	0	0
TOTAL:		8	0	0	0	0	0

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
OPERATIONAL ACTIVITIES - NAVY					
Helicopter Mine Countermeasures Squadron, HM 14, 53827					
ACDU	0	2	APOCS	8226	
	0	2	APOC	8226	
	0	11	APO1	8226	
	0	34	APO2	8226	
	0	30	APO3	8226	
	0	16	APOAN	8226	
	0	2	AT1	8391	
	0	5	AT2	8391	9502
	0	2	AT2	8391	9526
TAR	0	1	APOC	8226	
	0	2	APO1	8226	
	0	2	APO2	8226	
	0	2	APO3	8226	
	0	5	APOAN	8226	
	0	2	AT1	8391	
	0	2	AT2	8391	9502
SELRES	0	1	APOC	8226	
	0	2	APO1	8226	
	0	3	APO2	8226	
	0	4	APO3	8226	
	0	3	APOAN	8226	
ACTIVITY TOTAL:	0	133			
Helicopter Mine Countermeasures Squadron, HM 15, 55201					
ACDU	0	2	APOCS	8226	
	0	2	APOC	8226	
	0	11	APO1	8226	
	0	34	APO2	8226	
	0	30	APO3	8226	
	0	16	APOAN	8226	
	0	2	AT1	8391	
	0	5	AT2	8391	9502
	0	2	AT2	8391	9526
TAR	0	1	APOC	8226	
	0	2	APO1	8226	
	0	2	APO2	8226	
	0	2	APO3	8226	
	0	5	APOAN	8226	
	0	2	AT1	8391	
	0	2	AT2	8391	9502

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
SELRES	0	1	APOC	8226	
	0	2	APO1	8226	
	0	3	APO2	8226	
	0	4	APO3	8226	
	0	3	APOAN	8226	
ACTIVITY TOTAL:	0	133			
FLEET SUPPORT ACTIVITIES - NAVY					
AIMD NAS Norfolk, 44325					
ACDU	0	4	AT2	8391	
	0	1	AT2	8391	9527
ACTIVITY TOTAL:	0	5			
Helicopter Tactical Wing 1, NAS Norfolk, 44890					
ACDU	0	1	AD1	8226	8303
	0	1	ATC	8391	9502
ACTIVITY TOTAL:	0	2			
HMT 302 Navy DET, 55203					
ACDU	0	1	AD2	8226	
	0	4	AD3	8226	
	0	1	APOC	8226	9502
	0	2	APO1	8226	9502
	0	4	APO2	8226	9502
ACTIVITY TOTAL:	0	12			
MCS 12 Inchon, 20009					
ACDU	0	1	AT2	8391	9502
ACTIVITY TOTAL:	0	1			
Naval Air Station, Corpus Christi, 00216, FY99 Increment					
ACDU	0	1	AT1	8391	
ACTIVITY TOTAL:	0	1			
NAVRTYWING ACTESTRON, 39784					
ACDU	0	1	AD2	8226	
	0	1	AE2	8226	
ACTIVITY TOTAL:	0	2			

II.A.1.b. BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

NAVSURFWARCEN COASTSYSTA NWC, Panama City, 61331

ACTIVITY, UIC, PHASING INCREMENT	BILLETS OFF	BILLETS ENL	DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS
ACDU	0	1	ADC	8226	
	0	1	ADC	8226	8303
	0	3	AD1	8226	8303
	0	2	AD2	8226	8303
	0	1	AEC	8226	
	0	1	AE1	8226	
	0	1	AE1	8226	8303
	0	1	AMH1	8226	8303
	0	1	AMH3	8226	
	0	1	AMS1	8226	8303
	0	1	AMS2	8226	8303
	0	1	AMS3	8226	
SELRES	0	6	AD1	8226	
ACTIVITY TOTAL:	0	21			
COMHELWINGRES, 09983					
TAR	0	1	AMH1	8226	
ACTIVITY TOTAL:	0	1			

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

DESIG/ RATING	PNEC/SNEC PMOS/SMOS	PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
NAVY OPERATIONAL ACTIVITIES - ACDU													
APOCS	8226		4		0		0		0		0		0
APOC	8226		4		0		0		0		0		0
APO1	8226		22		0		0		0		0		0
APO2	8226		68		0		0		0		0		0
APO3	8226		60		0		0		0		0		0
APOAN	8226		32		0		0		0		0		0
AT1	8391		4		0		0		0		0		0
AT2	8391 9502		10		0		0		0		0		0
AT2	8391 9526		4		0		0		0		0		0
NAVY OPERATIONAL ACTIVITIES - TAR													
APOC	8226		2		0		0		0		0		0
APO1	8226		4		0		0		0		0		0
APO2	8226		4		0		0		0		0		0
APO3	8226		4		0		0		0		0		0
APOAN	8226		10		0		0		0		0		0
AT1	8391		4		0		0		0		0		0
AT2	8391 9502		4		0		0		0		0		0
NAVY OPERATIONAL ACTIVITIES - SELRES													
APOC	8226		2		0		0		0		0		0
APO1	8226		4		0		0		0		0		0
APO2	8226		6		0		0		0		0		0
APO3	8226		8		0		0		0		0		0
APOAN	8226		6		0		0		0		0		0
NAVY FLEET SUPPORT ACTIVITIES - ACDU													
ADC	8226		1		0		0		0		0		0
ADC	8226 8303		1		0		0		0		0		0
AD1	8226 8303		4		0		0		0		0		0
AD2	8226		2		0		0		0		0		0
AD2	8226 8303		2		0		0		0		0		0
AD3	8226		4		0		0		0		0		0
AEC	8226		1		0		0		0		0		0
AE1	8226		1		0		0		0		0		0
AE1	8226 8303		1		0		0		0		0		0
AE2	8226		1		0		0		0		0		0
AMH1	8226 8303		1		0		0		0		0		0
AMH3	8226		1		0		0		0		0		0
AMS1	8226 8303		1		0		0		0		0		0
AMS2	8226 8303		1		0		0		0		0		0
AMS3	8226		1		0		0		0		0		0
APOC	8226 9502		1		0		0		0		0		0
APO1	8226 9502		2		0		0		0		0		0
APO2	8226 9502		4		0		0		0		0		0
ATC	8391 9502		1		0		0		0		0		0
AT1	8391		1		0		0		0		0		0
AT2	8391		4		0		0		0		0		0
AT2	8391 9502		1		0		0		0		0		0
AT2	8391 9527		1		0		0		0		0		0

II.A.1.c. TOTAL BILLETS REQUIRED FOR OPERATIONAL AND FLEET SUPPORT ACTIVITIES

NAVY FLEET SUPPORT ACTIVITIES - TAR							
AMH1	8226	1	0	0	0	0	0
NAVY FLEET SUPPORT ACTIVITIES - SELRES							
AD1	8226	6	0	0	0	0	0

SUMMARY TOTALS:

NAVY OPERATIONAL ACTIVITIES - ACDU	208	0	0	0	0	0
NAVY OPERATIONAL ACTIVITIES - TAR	32	0	0	0	0	0
NAVY OPERATIONAL ACTIVITIES - SELRES	26	0	0	0	0	0
NAVY FLEET SUPPORT ACTIVITIES - ACDU	38	0	0	0	0	0
NAVY FLEET SUPPORT ACTIVITIES - TAR	1	0	0	0	0	0
NAVY FLEET SUPPORT ACTIVITIES - SELRES	6	0	0	0	0	0

GRAND TOTALS:

NAVY - ACDU	246	0	0	0	0	0
NAVY - TAR	33	0	0	0	0	0
NAVY - SELRES	32	0	0	0	0	0

II.A.3. TRAINING ACTIVITIES INSTRUCTOR AND SUPPORT BILLET REQUIREMENTS

DESIG RATING	PNEC/SNEC PMOS/SMOS		PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
TRAINING ACTIVITY, LOCATION, UIC: AWSTS Norfolk, 69022														
INSTRUCTOR BILLETS														
ACDU														
AMS1	8226	9502	0	1	0	1	0	1	0	1	0	1	0	1
APOC	8226	9502	0	1	0	1	0	1	0	1	0	1	0	1
APO1	8226	9502	0	1	0	1	0	1	0	1	0	1	0	1
APO2	8226	9502	0	1	0	1	0	1	0	1	0	1	0	1
TOTAL:			0	4	0	4	0	4	0	4	0	4	0	4
TRAINING ACTIVITY, LOCATION, UIC: MTU 1031 NAMTRAGRUDET Norfolk, 66046														
INSTRUCTOR BILLETS														
ACDU														
ATC	8391	9502	0	1	0	1	0	1	0	1	0	1	0	1
AT2	8391	9502	0	1	0	1	0	1	0	1	0	1	0	1
TOTAL:			0	2	0	2	0	2	0	2	0	2	0	2

II.A.4. CHARGEABLE STUDENT BILLET REQUIREMENTS

ACTIVITY, LOCATION, UIC	USN/ USMC	PFYs OFF	PFYs ENL	CFY00 OFF	CFY00 ENL	FY01 OFF	FY01 ENL	FY02 OFF	FY02 ENL	FY03 OFF	FY03 ENL	FY04 OFF	FY04 ENL
AWSTS Norfolk, 69022													
	NAVY		1.2		1.2		1.2		1.2		1.2		1.2
NAMTRAGRUDET MTU 1031, 66046													
	NAVY		2.0		2.0		2.0		2.0		2.0		2.0
SUMMARY TOTALS:													
	NAVY		3.2		3.2		3.2		3.2		3.2		3.2
GRAND TOTALS:													
			3.4		3.2		3.2		3.2		3.2		3.2

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00 +/-	CFY00 CUM	FY01 +/-	FY01 CUM	FY02 +/-	FY02 CUM	FY03 +/-	FY03 CUM	FY04 +/-	FY04 CUM
c. OFFICER - USMC			Not Applicable										
d. ENLISTED - USMC			Not Applicable										
a. OFFICER - USN			Not Applicable										
b. ENLISTED – USN													
Operational Billets ACDU and TAR													
APOCS	8226		4	0	4	0	4	0	4	0	4	0	4
APOC	8226		6	0	6	0	6	0	6	0	6	0	6
APO1	8226		26	0	26	0	26	0	26	0	26	0	26
APO2	8226		72	0	72	0	72	0	72	0	72	0	72
APO3	8226		64	0	64	0	64	0	64	0	64	0	64
APOAN	8226		42	0	42	0	42	0	42	0	42	0	42
AT1	8391		8	0	8	0	8	0	8	0	8	0	8
AT2	8391	9502	14	0	14	0	14	0	14	0	14	0	14
AT2	8391	9526	4	0	4	0	4	0	4	0	4	0	4
Fleet Support Billets ACDU and TAR													
ADC	8226		1	0	1	0	1	0	1	0	1	0	1
ADC	8226	8303	1	0	1	0	1	0	1	0	1	0	1
AD1	8226	8303	4	0	4	0	4	0	4	0	4	0	4
AD2	8226		2	0	2	0	2	0	2	0	2	0	2
AD2	8226	8303	2	0	2	0	2	0	2	0	2	0	2
AD3	8226		4	0	4	0	4	0	4	0	4	0	4
AEC	8226		1	0	1	0	1	0	1	0	1	0	1
AE1	8226		1	0	1	0	1	0	1	0	1	0	1
AE1	8226	8303	1	0	1	0	1	0	1	0	1	0	1
AE2	8226		1	0	1	0	1	0	1	0	1	0	1
AMH1	8226		1	0	1	0	1	0	1	0	1	0	1
AMH1	8226	8303	1	0	1	0	1	0	1	0	1	0	1
AMH3	8226		1	0	1	0	1	0	1	0	1	0	1
AMS1	8226	8303	1	0	1	0	1	0	1	0	1	0	1
AMS2	8226	8303	1	0	1	0	1	0	1	0	1	0	1
AMS3	8226		1	0	1	0	1	0	1	0	1	0	1
APOC	8226	9502	1	0	1	0	1	0	1	0	1	0	1
APO1	8226	9502	2	0	2	0	2	0	2	0	2	0	2
APO2	8226	9502	4	0	4	0	4	0	4	0	4	0	4
ATC	8391	9502	1	0	1	0	1	0	1	0	1	0	1
AT1	8391		1	0	1	0	1	0	1	0	1	0	1
AT2	8391		4	0	4	0	4	0	4	0	4	0	4
AT2	8391	9502	1	0	1	0	1	0	1	0	1	0	1
AT2	8391	9527	1	0	1	0	1	0	1	0	1	0	1
Staff Billets ACDU and TAR													
AMS1	8226	9502	1	0	1	0	1	0	1	0	1	0	1
APOC	8226	9502	1	0	1	0	1	0	1	0	1	0	1
APO1	8226	9502	1	0	1	0	1	0	1	0	1	0	1
APO2	8226	9502	1	0	1	0	1	0	1	0	1	0	1
ATC	8391	9502	1	0	1	0	1	0	1	0	1	0	1
AT2	8391	9502	1	0	1	0	1	0	1	0	1	0	1

II.A.5. ANNUAL INCREMENTAL AND CUMULATIVE BILLETS

DESIG/ RATING	PNEC/ PMOS	SNEC/ SMOS	BILLET BASE	CFY00 +/-	CFY00 CUM	FY01 +/-	FY01 CUM	FY02 +/-	FY02 CUM	FY03 +/-	FY03 CUM	FY04 +/-	FY04 CUM
Chargeable Student Billets ACDU and TAR			3	0	3	0	3	0	3	0	3	0	3
SELRES Billets													
AD1	8226		6	0	6	0	6	0	6	0	6	0	6
APOC	8226		2	0	2	0	2	0	2	0	2	0	2
APO1	8226		4	0	4	0	4	0	4	0	4	0	4
APO2	8226		6	0	6	0	6	0	6	0	6	0	6
APO3	8226		8	0	8	0	8	0	8	0	8	0	8
APOAN	8226		6	0	6	0	6	0	6	0	6	0	6
TOTAL USN ENLISTED BILLETS:													
Operational			240	0	240	0	240	0	240	0	240	0	240
Fleet Support			39	0	39	0	39	0	39	0	39	0	39
Staff			6	0	6	0	6	0	6	0	6	0	6
Chargeable Student			3	0	3	0	3	0	3	0	3	0	3
SELRES			32	0	32	0	32	0	32	0	32	0	32

II.B. PERSONNEL REQUIREMENTS

II.B.1. ANNUAL TRAINING INPUT REQUIREMENTS

CIN, COURSE TITLE: D-050-2720, AN/AQS-14 Side Looking Sonar Operator
COURSE LENGTH: 1.0 Week **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 10% **BACKOUT FACTOR:** 0.00

TRAINING		ACDU/TAR	CFY00		FY01		FY02		FY03		FY04	
ACTIVITY	SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
AWSTS Norfolk, NAS Norfolk												
	NAVY	ACDU		81		81		81		81		81
		TAR		9		9		9		9		9
		SELRES		3		3		3		3		3
		TOTAL:		93		93		93		93		93

CIN, COURSE TITLE: D-102-2727, AMCM Electronic/Electrical Systems Organizational/Intermediate Maintenance
COURSE LENGTH: 9.4 Weeks **TOUR LENGTH:** 36 Months
ATTRITION FACTOR: Navy: 10% **BACKOUT FACTOR:** 0.19

TRAINING		ACDU/TAR	CFY00		FY01		FY02		FY03		FY04	
ACTIVITY	SOURCE	SELRES	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL
MTU 1031, NAMTRAGRU DET												
	NAVY	ACDU		9		9		9		9		9
		TAR		3		3		3		3		3
		TOTAL:		12		12		12		12		12

PART III - TRAINING REQUIREMENTS

The following elements are not affected by the AN/AQS-14A Sonar Detecting Set and, therefore, are not included in Part III of this NTSP:

III.A.1. Initial Training Requirements

III.A.2. Follow-on Training

III.A.2.b. Planned Courses

III.A.2.c. Unique Courses

III.A.3. Existing Training Phased Out

III.A.2. FOLLOW-ON TRAINING

III.A.2.a. EXISTING COURSES

CIN, COURSE TITLE: D-050-2720, AN/AQS-14 Side Looking Sonar Operator
TRAINING ACTIVITY: AWSTS Norfolk
LOCATION, UIC: NAS Norfolk, 69022

SOURCE: NAVY **STUDENT CATEGORY:** ACDU - TAR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	90		90		90		90		90	ATIR
	81		81		81		81		81	Output
	1.2		1.2		1.2		1.2		1.2	AOB
	1.2		1.2		1.2		1.2		1.2	Chargeable

SOURCE: NAVY **STUDENT CATEGORY:** SELRES

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	3		3		3		3		3	ATIR
	3		3		3		3		3	Output
	0.0		0.0		0.0		0.0		0.0	AOB
	0.0		0.0		0.0		0.0		0.0	Chargeable

CIN, COURSE TITLE: D-102-2727, AMCM Electronic/Electrical Systems Organizational/Intermediate Maintenance
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC: NAS Norfolk, 66046

SOURCE: NAVY **STUDENT CATEGORY:** ACDU - TAR

CFY00		FY01		FY02		FY03		FY04		
OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	OFF	ENL	
	12		12		12		12		12	ATIR
	11		11		11		11		11	Output
	2.0		2.0		2.0		2.0		2.0	AOB
	2.0		2.0		2.0		2.0		2.0	Chargeable

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

The following elements are not affected by the AN/AQS-14A Sonar Detecting Set and, therefore, are not included in Part IV of this NTSP:

IV.B. Courseware Requirements

IV.B.1. Training Services

IV.C. Facility Requirements

IV.C.1. Facility Requirements Summary (Space/Support) by Activity

IV.C.2. Facility Requirements Detailed by Activity and Course

IV.C.3. Facility Project Summary by Program

PART IV - TRAINING LOGISTICS SUPPORT REQUIREMENTS

IV.A. TRAINING HARDWARE

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: C-102-9728, AMCM Electronics/Electrical Systems Organizational/Intermediate Maintenance (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC: Norfolk, 66046

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
43	Cable W8 Interconnecting	1	Apr 99	GFE	Onboard
19	Cable Assembly, Special P/N: 9754D12G06	1	Apr 99	GFE	Onboard
20	Cable Assembly, Special P/N: 9754D12G07	1	Apr 99	GFE	Onboard
21	Cable Assembly, Special P/N: E754D12G08	1	Apr 99	GFE	Onboard
30	Monitor Assembly	1	Apr 99	GFE	Onboard
1	Tow Cable Assembly	1	Apr 99	GFE	Onboard
10	Sonar Filter Assembly F-1496	1	Apr 99	GFE	Onboard
11	Tow Cable Assembly	1	Apr 99	GFE	Onboard
12	Cable Assembly, Special P/N: 5324C04H15	1	Apr 99	GFE	Onboard
13	Cable Assembly, Special P/N: 5324C04H13	1	Apr 99	GFE	Onboard
14	Cable Assembly, Special P/N: 9754D12G01	1	Apr 99	GFE	Onboard
15	Cable Assembly, Special P/N: 9754D12G02	1	Apr 99	GFE	Onboard
16	Cable Assembly, Special P/N: 9754D12G03	1	Apr 99	GFE	Onboard
17	Cable Assembly, Special P/N: 9754D12G04	1	Apr 99	GFE	Onboard
18	Cable Assembly, Special P/N: 9754D12G05	1	Apr 99	GFE	Onboard
2	Towed Body, Sonar	1	Apr 99	GFE	Onboard
22	Cable Assembly, Special P/N: 9754D12G09	1	Apr 99	GFE	Onboard
23	Cable Assembly, Special P/N: 9754D12G10	1	Apr 99	GFE	Onboard
24	Cable Assembly, Special P/N: 9754D12G11	1	Apr 99	GFE	Onboard
25	Cable Assembly, Special P/N: 9754D12G12	1	Apr 99	GFE	Onboard
26	Cable Assembly, Special P/N: 9754D12G13	1	Apr 99	GFE	Onboard
27	Cable Assembly, Special P/N: 9754D12G14	1	Apr 99	GFE	Onboard
28	Tow Cable, Shop Test	1	Apr 99	GFE	Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

29	Console Assembly	2	Apr 99	GFE	Onboard
3	Wired Drawer Assembly	1	Apr 99	GFE	Onboard
31	Control Processor	1	Apr 99	GFE	Onboard
32	Recorder Reproducer	1	Apr 99	GFE	Onboard
33	Power Distribution Unit	1	Apr 99	GFE	Onboard
34	Towed Vehicle	1	Apr 99	GFE	Onboard
35	Cable W1	1	Apr 99	GFE	Onboard
36	Cable W2	1	Apr 99	GFE	Onboard
37	Cable W3	1	Apr 99	GFE	Onboard
38	Cable W4	1	Apr 99	GFE	Onboard
39	Cable W5	1	Apr 99	GFE	Onboard
4	Receiver Indicator	1	Apr 99	GFE	Onboard
40	Cable W6	1	Apr 99	GFE	Onboard
41	Cable W7	1	Apr 99	GFE	Onboard
42	Cradle Assembly AQS14	2	Apr 99	GFE	Onboard
44	Cable W9 Interconnecting	3	Apr 99	GFE	Onboard
5	Control C-10753	1	Apr 99	GFE	Onboard
6	Sonar Data Computer	1	Apr 99	GFE	Onboard
7	Digital Data Printer	1	Apr 99	GFE	Onboard
8	Drawer Electrical	1	Apr 99	GFE	Onboard
9	Control Indicator Power Supply C-10754	1	Apr 99	GFE	Onboard
GPTE					
1	Multimeter	1	Apr 99	GFE	Onboard
2	Power Supply AC To DC	1	Apr 99	GFE	Onboard
3	Power Frequency Converter	2	Apr 99	GFE	Onboard
ST					
1	Tool Joint Ring	1	Apr 99	GFE	Onboard
2	Shop Power Connector	2	Apr 99	GFE	Onboard

IV.A.1. TTE / GPTE / SPTE / ST / GPETE / SPETE

CIN, COURSE TITLE: C-600-9472, Airborne Mine Countermeasures (AMCM) Sled Captain Training (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC: Norfolk, 66046

ITEM NO.	EQUIPMENT / TYPE OR RANGE OF REPAIR PARTS	QTY REQD	DATE REQD	GFE CFE	STATUS
TTE					
45	MK-105 SLED	1	Dec 95	GFE	Onboard
ST					
3	Adapter, Fuel Sampler	1	Dec 95	GFE	Onboard
4	Straps, Cargo	4	Dec 95	GFE	Onboard
5	Pan, Drip	2	Dec 95	GFE	Onboard
6	Fire Extinguisher, Portable Bottle	1	Dec 95	GFE	Onboard
7	Handle, Steering	1	Dec 95	GFE	Onboard
8	Gage Assembly, Dual Chuck Stem	1	Dec 95	GFE	Onboard

IV.A.2. TRAINING DEVICES

DEVICE: Sonar Detecting Training Set
DESCRIPTION: P/N: 1986E74G01
MANUFACTURER: Northrop Grumman
CONTRACT NUMBER: N00024-93-G-63357H02
TEE STATUS: Onboard

TRAINING ACTIVITY: AWSTS Norfolk
LOCATION, UIC : NAS Norfolk, 69022

QTY REQD	DATE REQD	RFT DATE	STATUS	COURSES SUPPORTED
01	Jun 99	Jun 99	Onboard	D-050-2793 (Track D-050-2720)

IV.B. COURSEWARE REQUIREMENTS

IV.B.2. CURRICULA MATERIALS AND TRAINING AIDS

CIN, COURSE TITLE: D-050-2793, MH-53E Fleet Replacement Aircrewman (AMCM) Cat 1 Pipeline (Track D-050-2720)
TRAINING ACTIVITY: AWSTS Norfolk
LOCATION, UIC: NAS Norfolk, 69022

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Laser Disks	10	Jun 99	Onboard
Student Guides	6	Jun 99	Onboard

CIN, COURSE TITLE: C-102-9728, AMCM Electronics/Electrical Systems Organizational/Intermediate Maintenance (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC: Norfolk, 66046

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Integrated VHS/Play/Recorder with 20" Monitor	1	Apr 99	Onboard
Projector, Overhead	1	Apr 99	Onboard
Projector, Screen	1	Apr 99	Onboard
Projector, Slide	1	Apr 99	Onboard
Slides	43	Apr 99	Onboard
Trainee Guide, NAMTG-N4627 (s)	10	Apr 99	Onboard
Transparencies	13	Apr 99	Onboard

CIN, COURSE TITLE: C-600-9472, Airborne Mine Countermeasures (AMCM) Sled Captain Training (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC: Norfolk, 66046

TYPES OF MATERIAL OR AID	QTY REQD	DATE REQD	STATUS
Integrated VHS/Play/Recorder with 20" Monitor	1	Dec 95	Onboard
Trainee Guide, NAMTRG-N4618	10	Dec 95	Onboard
Videotape, Airborne Mine Countermeasures MK-105 Launch and Recovery Operations Part I (LPH)	1	Dec 95	Onboard
Videotape, Airborne Mine Countermeasures MK-105 Launch and Recovery Operations Part II (LPH)	1	Dec 95	Onboard
Videotape, Airborne Mine Countermeasures MK-105 Launch and Recovery Operations Part III (LPH)	1	Dec 95	Onboard
Videotape, Airborne Mine Countermeasures MK-105 Launch and Recovery Operations Part IV (LPH)	1	Dec 95	Onboard

IV.B.3. TECHNICAL MANUALS

CIN, COURSE TITLE: D-050-2793, MH-53E Fleet Replacement Aircrewman (AMCM) Cat 1 Pipeline (Track D-050-2720)
TRAINING ACTIVITY: AWSTS Norfolk
LOCATION, UIC : NAS Norfolk, 69022

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
A1-H53ME-NFM000-00 H-53 NATOPS Manual	Hard copy	7	Jun 99	Onboard
A1-H53ME-NFM000-00 H-53 NATOPS Manual Supplement	Hard copy	7	Jun 99	Onboard

CIN, COURSE TITLE: C-102-9728, AMCM Electronics/Electrical Systems Organizational/Intermediate Maintenance (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC : Norfolk, 66046

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
AW-565BD-730-700 Technical Manual, Organizational and Intermediate Maintenance with Illustrated Parts Breakdown, Interconnecting Cable with transit case (U)	Hard copy	1	Apr 99	Onboard
AW-565BD-MMO-000/ (S) Technical Manual, Organizational Maintenance with Illustrated Parts Breakdown, Mine Countermeasures Set AN/ALQ-141 (S)	Hard copy	10	Apr 99	Onboard
AW-565BD-MMO-100 Technical Manual, Organizational Maintenance Instructions with Illustrated Parts Breakdown, Sonar Detecting Set AN/AQS-14 and AN/AQS-14A (U)	Hard copy	10	Apr 99	Onboard
AW-565BD-MRC-000 Technical Manual, Periodic Maintenance Requirements, Mine Countermeasures Set AN/ALQ-141 (U)	Hard copy	10	Apr 99	Onboard
NA-11-600-24-6-3 Technical Manual, Organizational Level Special/Preservation/ Conditional Maintenance Requirements AN/AQS-14A Sonar Detecting Set (U)	Hard copy	10	Apr 99	Onboard

CIN, COURSE TITLE: C-600-9472, Airborne Mine Countermeasures (AMCM) Sled Captain Training (Track D-102-2727)
TRAINING ACTIVITY: MTU 1031 NAMTRAGRU DET
LOCATION, UIC : Norfolk, 66046

TECHNICAL MANUAL NUMBER / TITLE	MEDIUM	QTY REQD	DATE REQD	STATUS
NA 11-600-12-6 Technical Manual, Periodic Maintenance Information Cards, Magnetic Minesweeping Gear MK 105	Hard copy	10	Dec 95	Onboard
NA 11-600-12-6-1 Turnaround Checklist, Mark 105, Magnetic Minesweeping Gear	Hard copy	10	Dec 95	Onboard

IV.B.3. TECHNICAL MANUALS

NA 11-600-12-6-2 Technical Manual, Daily, Magnetic Minesweeping Gear MARK 105	Hard copy	10	Dec 95	Onboard
NA 11-600-12-6-3 Technical Manual, Calendar/Special/Preservation/Conditional, Magnetic Minesweeping Gear MARK 105	Hard copy	10	Dec 95	Onboard
NA 11-80MSA-2-1 Technical Manual, Organizational General Information MK-105	Hard copy	10	Dec 95	Onboard
NA 11-80MSA-2-4 Technical Manual, Organizational and Intermediate, Electrical/Instrument Systems MK 105	Hard copy	10	Dec 95	Onboard
NA 19-1-129 Maintenance Instructions with Illustrated Parts Breakdown, Mobile Winch Drum A/M 42U-1	Hard copy	10	Dec 95	Onboard
NA 19-600-161-6-1 Preoperational Checklist, Mobile Winch Drum A/M 42U-1	Hard copy	10	Dec 95	Onboard
NA 19-600-161-6-2 Technical Manual, Periodic Maintenance Requirements Manual, Mobile Winch Drum A/M 42U-1	Hard copy	10	Dec 99	Onboard
NWP-27-3 Naval Warfare Publication, Airborne Mine Countermeasures, Operations (U)	Hard copy	10	Dec 99	Onboard

PART V - MPT MILESTONES

COG CODE	MPT MILESTONES	DATE	STATUS
DA	Promulgated update Draft NTP to ALCON for review and comment	Feb 95	Completed
PDA	Proposed NTP submitted to OPNAV	Jun 95	Completed
DCNO (MPT)	Approved and promulgated NTP	Jul 95	Completed
PDA	Promulgated ILS Master Plan	Dec 95	Completed
TSA	Delivered curricula material	Sep 96	Completed
PDA	Promulgated revised ILS Master Plan	Feb 97	Completed
TSA	Began Initial Training	Dec 97	Completed
DCNO (MPT)	Approved and promulgated revised NTP	Jun 98	Completed
TA	Began follow-on training	Aug 98	Completed
PDA	Fleet Introduction	Oct 98	Completed
PDA	Achieved IOC	Oct 98	Completed
TSA	Develop Draft NTSP	Sep 99	Completed
PDA	Achieve MSD	Aug 00	Pending

PART VI - DECISION ITEMS/ACTION REQUIRED

DECISION ITEM OR ACTION REQUIRED	COMMAND ACTION	DUE DATE	STATUS
None			

PART VII - POINTS OF CONTACT

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